

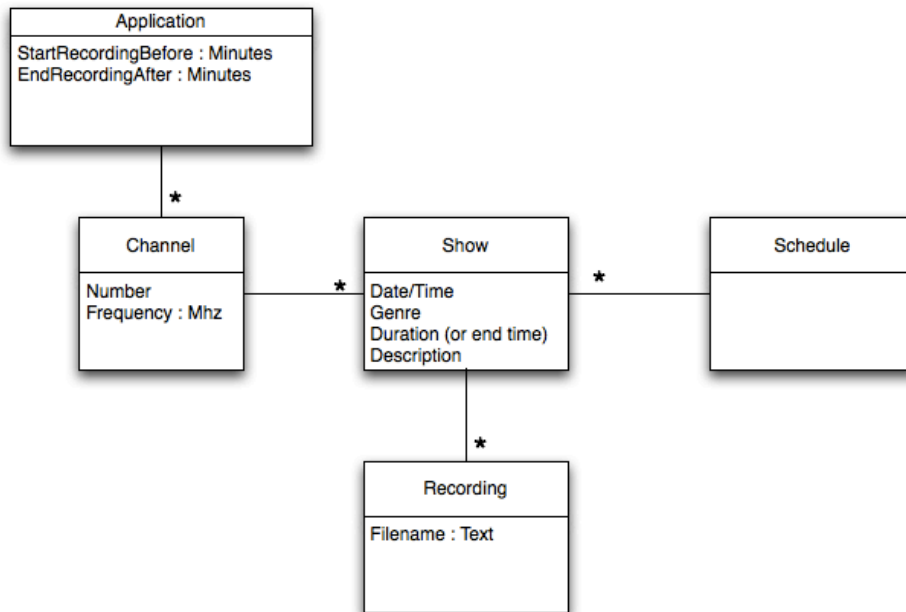
Tutorial - Extra class diagrams

Q1

Digital PVRs are devices that allow you to record TV shows onto a hard disc for later playback. They are embedded computers which have data storage requirements like any other system.

Consider the class diagram that would be needed for one. They should be able to...

- * Display a TV guide, listing each show for each TV channel, for the coming week. Each show also has a short description, and a genre.
- * Keep a list of shows that are to be recorded.
- * Record the extra length (in minutes) that should be recorded before the start and after the end of each show.
- * Maintain a list of shows that have been recorded. What extra information should you maintain with it?



Split up into groups of 4, and come up with 2 scenarios each. Apply one of the scenarios to the class diagram you have constructed.

As well as static scenarios you should consider if the information in your class diagram would allow you to perform the following. Describe (verbally!) the algorithm needed.

1. The user selects a show they would like to record. The program checks if there is any other recordings at the same time.
2. The system should display how many Gigabytes of data are stored by all of the recordings.

This requires that the filesize also be maintained in the diagram. They may think this is the job of the OS, but we are modelling the *problem* which does include this info.

The algorithm is "For each recording identified, examine its filesize. The question is "how do you identify each recording?"

It's easy to see on a piece of paper in an object diagram, but if it is in a computer's memory, we need some other way to search out and find the objects. This can be done by going through each channel, for each show, looking at how it is recorded.

But if we delete the show info after the date has passed, then we won't be able to find them. We then need to have a link b/w application and recording.